



Installing MacBook Pro 15" Retina Display Mid 2012 Logic Board

Written By: Brett Hartt



TOOLS:

- [MacBook Pro and Air 5-Point Pentalobe Screwdriver \(1\)](#)
- [Plastic Opening Tools \(1\)](#)
- [Spudger \(1\)](#)
- [T5 Torx Screwdriver \(1\)](#)



PARTS:

- [MacBook Pro 15" Retina 2.3 GHz Logic Board \(1\)](#)
- [MacBook Pro 15" Retina 2.6 GHz Logic Board \(1\)](#)
- [MacBook Pro 15" Retina 2.7 GHz Logic Board \(1\)](#)

SUMMARY

Did your laptop go for a swim? Logic board fried? Use this guide to install a new logic board.

Step 1 — Lower Case



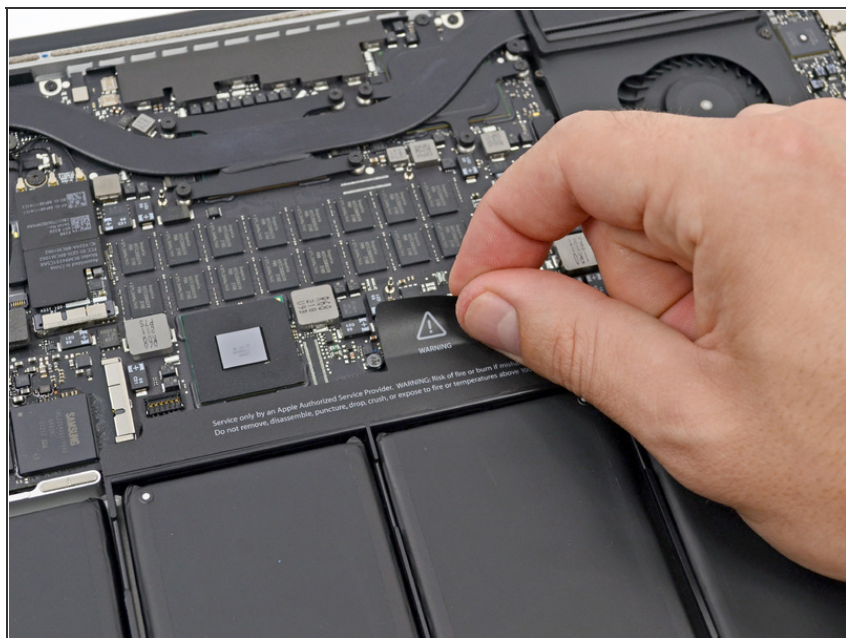
- Remove the following pentalobe screws securing the lower case to the MacBook Pro with Retina display.
 - Eight 3.0 mm
 - Two 2.3 mm

Step 2



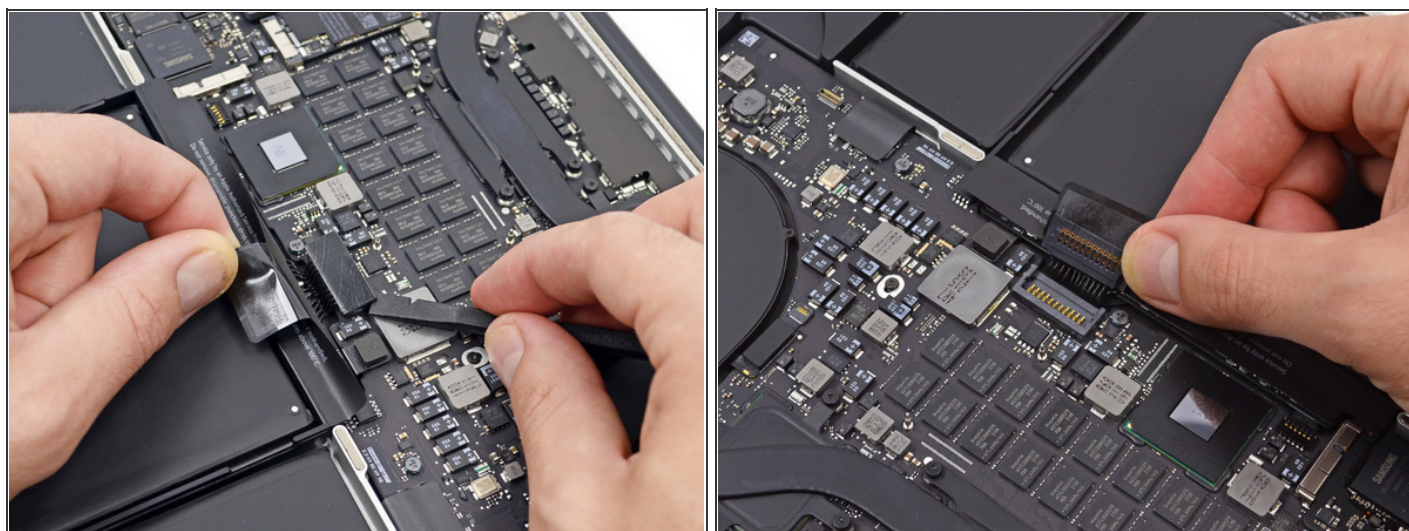
- Lifting from the edge nearest the clutch cover, lift the lower case off the MacBook Pro.
- Set the lower case aside.

Step 3 — Battery Connector



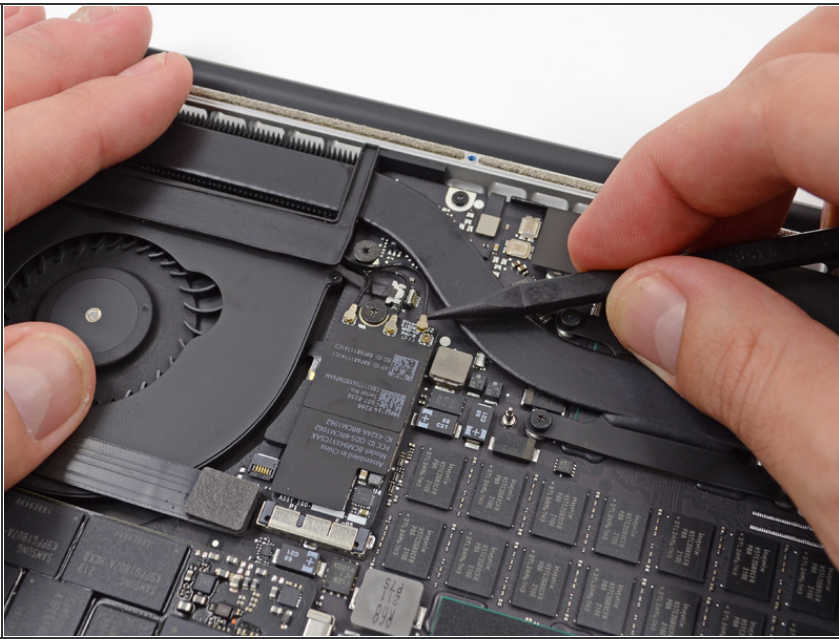
- Peel back the warning label covering the battery connector.

Step 4



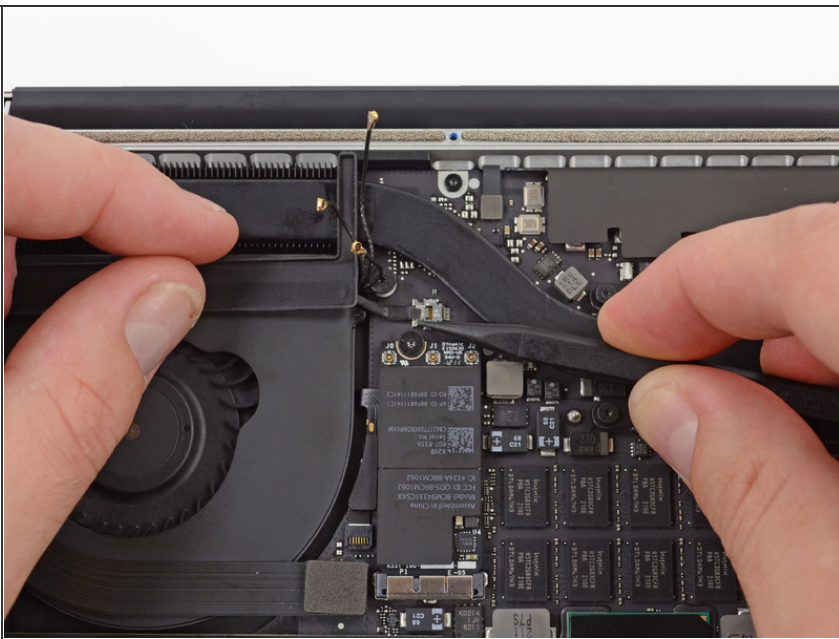
- Using the flat end of a spudger, gently pry the battery connector straight up out of its socket on the logic board.
- Bend the battery cables back and out of the way, ensuring that the battery connector doesn't accidentally make contact with the logic board.


Step 5 — AirPort/Camera Cable



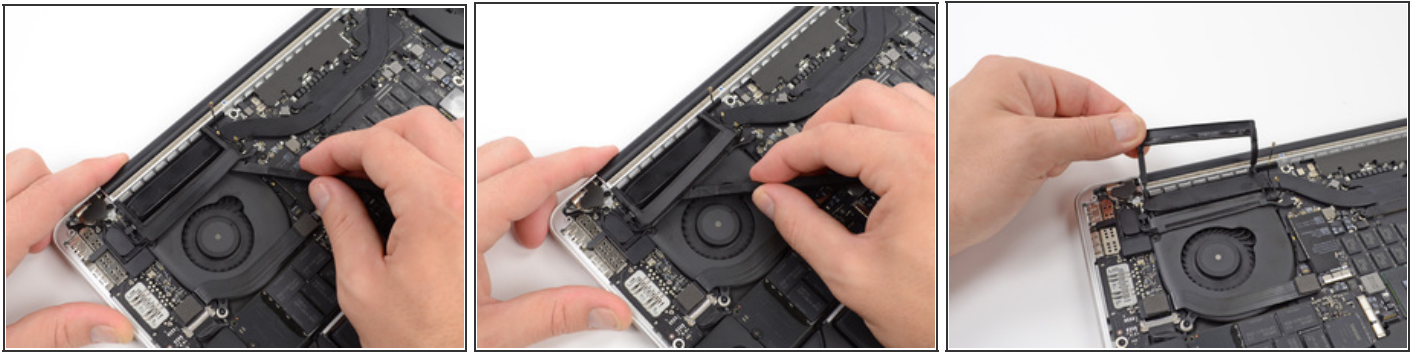
- Use the tip of a spudger to pry the three AirPort antenna cables straight up off of their sockets on the AirPort board.

Step 6



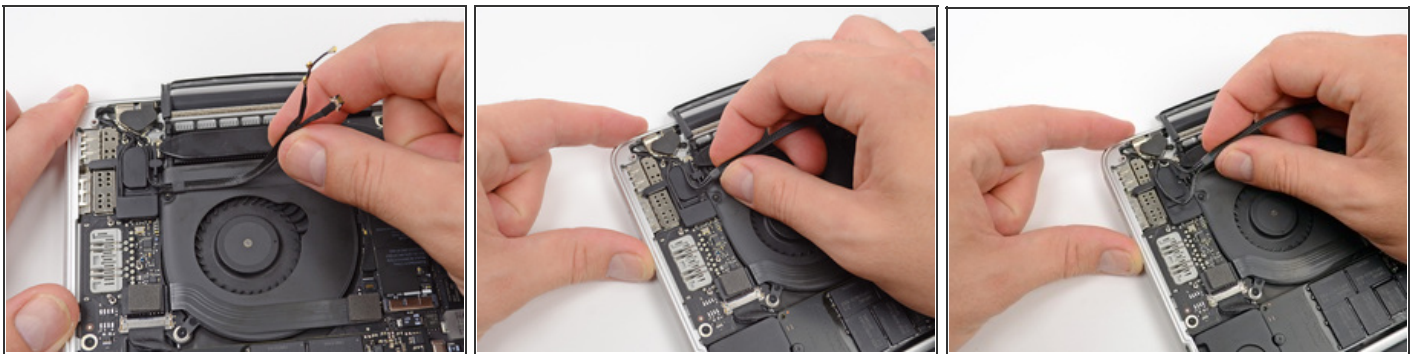
- Use the tip of a spudger to push the camera cable connector out of its socket on the logic board.
- Be sure to push parallel to the board, pushing first on one side, then the other to "walk" the connector out of its socket. 

Step 7



- Insert the flat end of a spudger underneath the rubber heat sink cover on the right fan.
- Slide the spudger underneath the length of the cover, releasing the adhesive.
- Lift the cover and flip it back so that you can access the cables underneath.

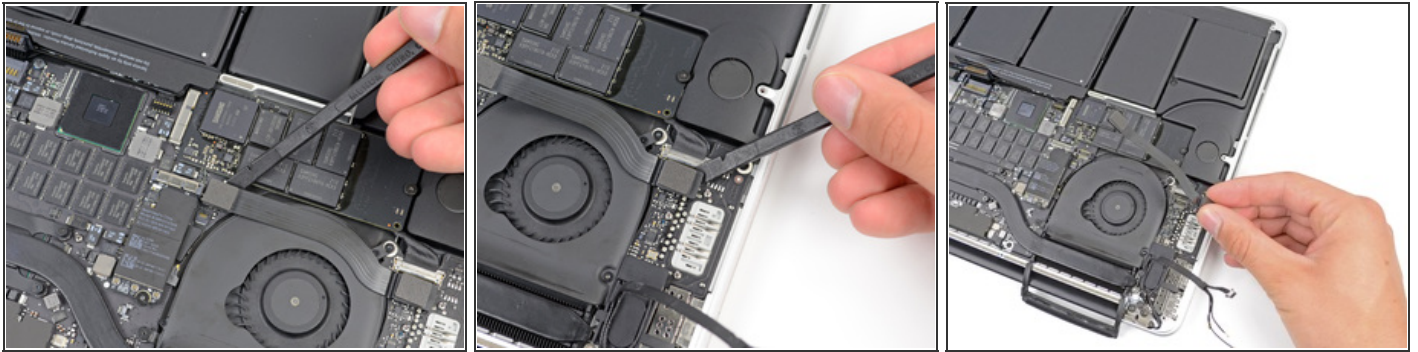
Step 8



- Use your fingers to pull the AirPort/Camera cables up off the fan.
 - The cables are adhered to the fan, so peel them up carefully to prevent ripping any.
- Carefully de-route the cables from the plastic cable guide.

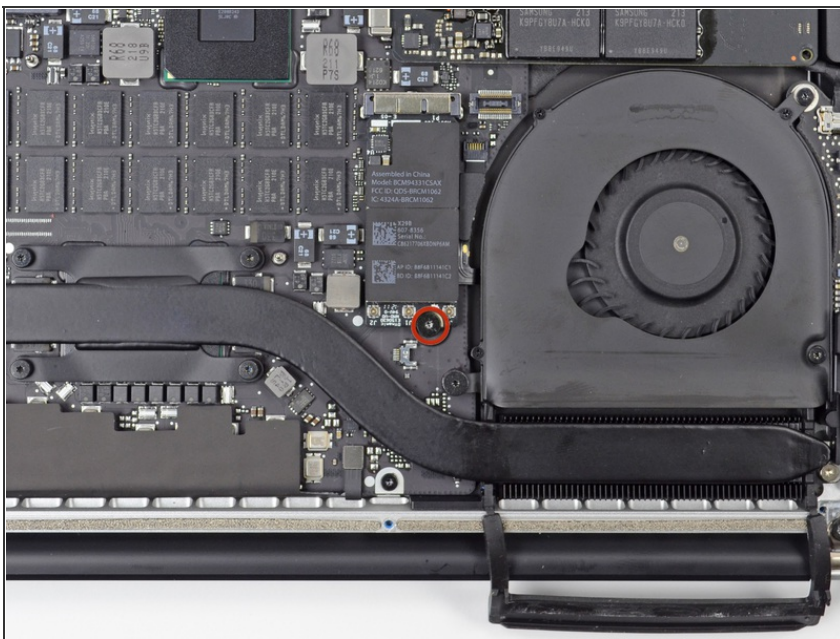


Step 9 — I/O Board Cable



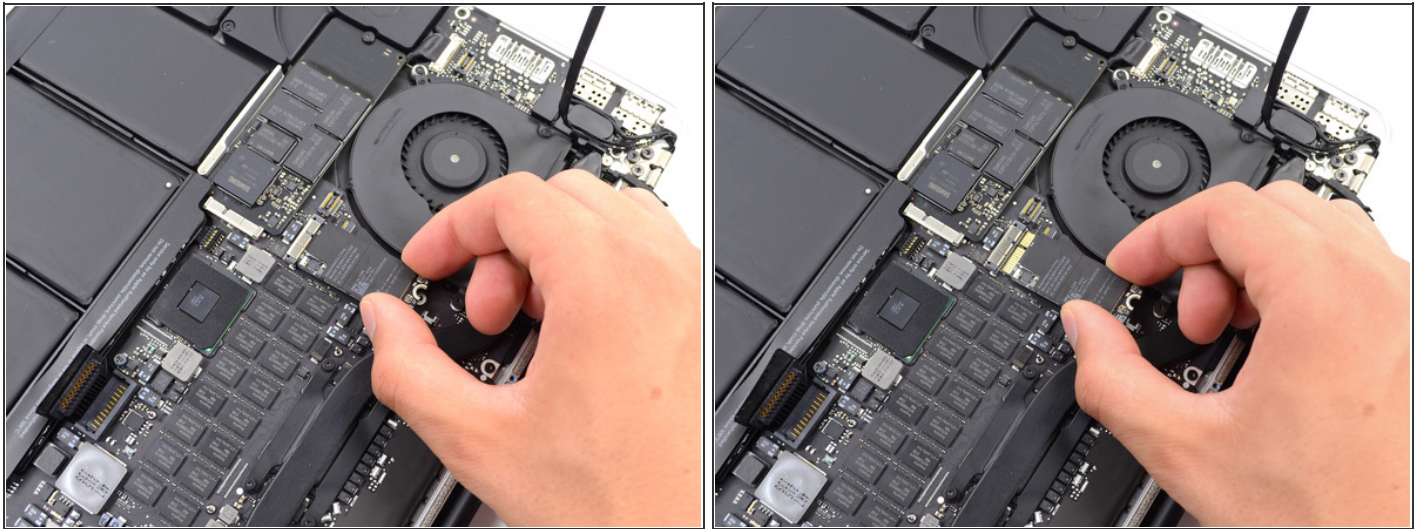
- Using the flat end of a spudger, pry the I/O Board connector straight up out of its socket on the logic board.
- In a similar fashion, remove the I/O Board connector from its socket on the I/O Board.
- Remove the I/O Board cable from the MacBook Pro.

Step 10 — Right Fan



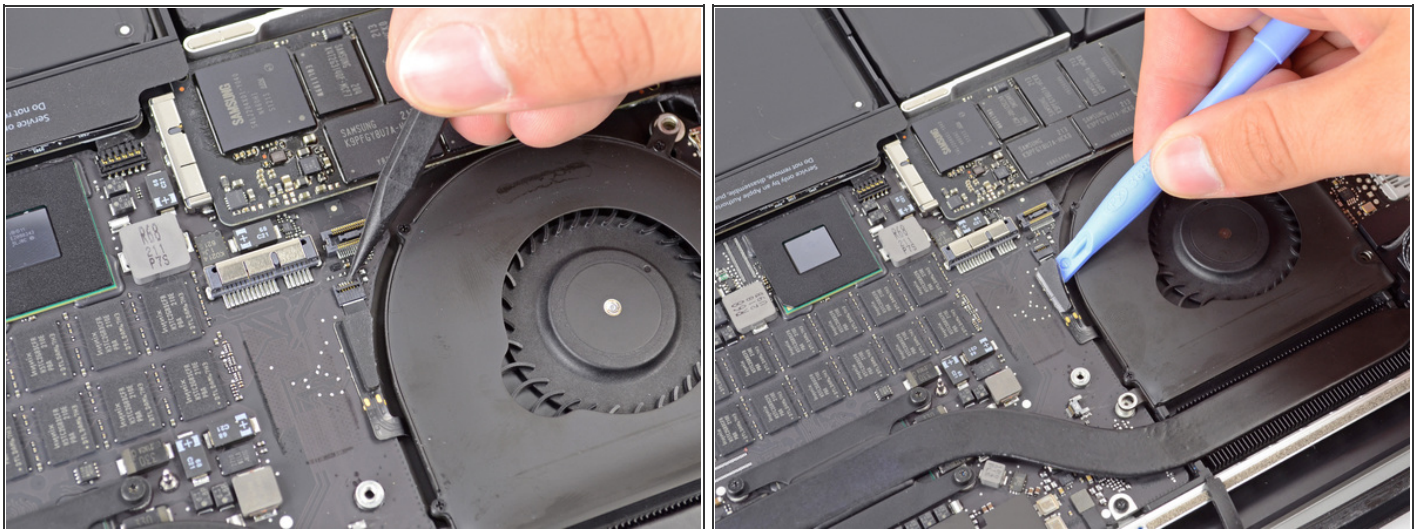
- Remove the single 2.9 mm T5 Torx screw securing the AirPort card to the logic board.

Step 11



- Grasp the side of the AirPort card and pull parallel to the logic board, removing the AirPort card from the MacBook Pro.

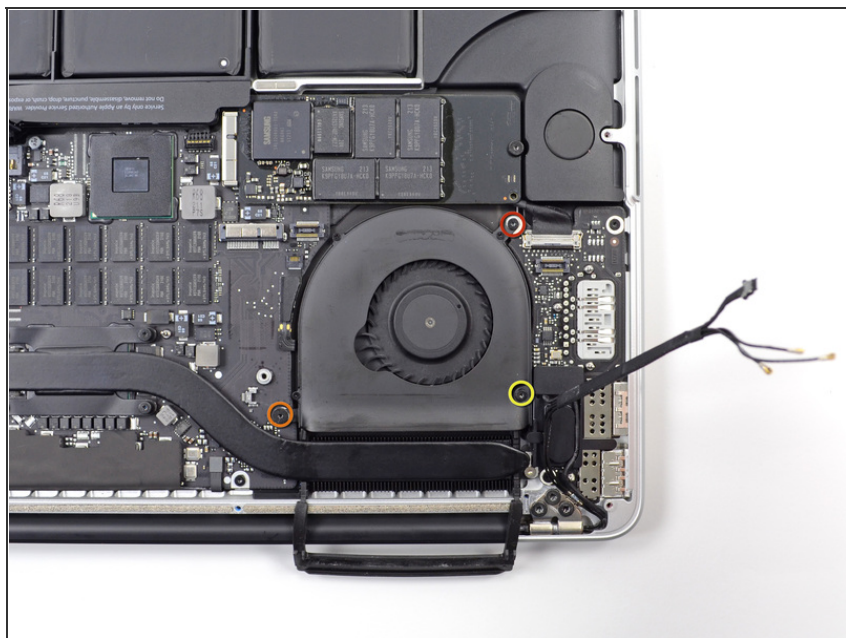
Step 12



- Use the tip of a spudger to flip up the retaining flap on the right fan ribbon cable ZIF socket.
- Be sure you are prying up on the hinged retaining flap, **not** the socket itself.
- Gently pry up the right fan ribbon cable from the logic board.



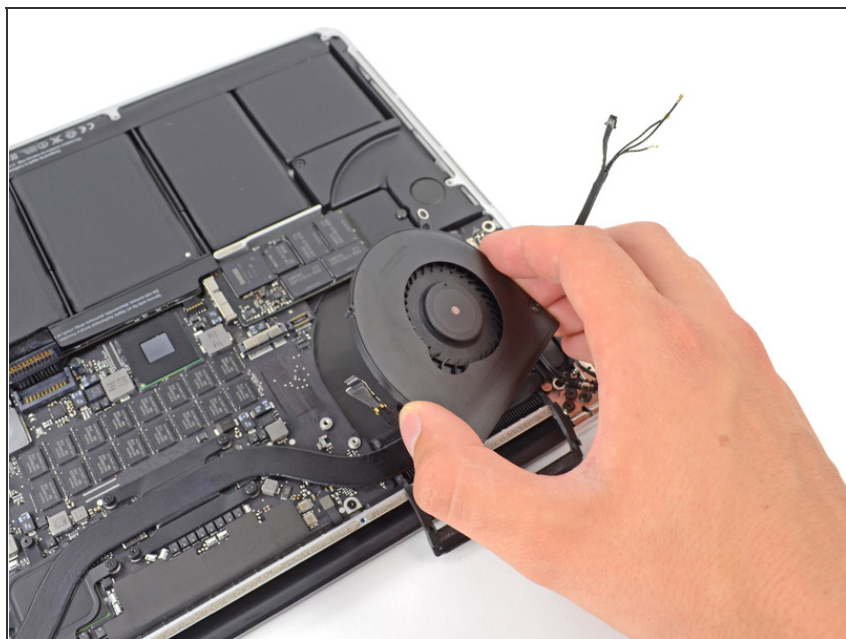
Step 13



- Remove the following three screws securing the right fan to the logic board:

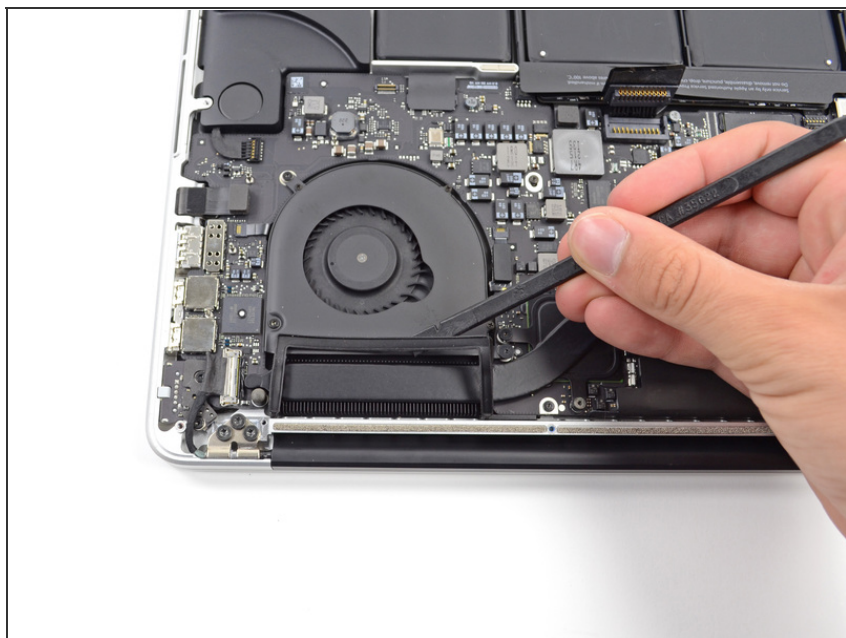
- One 4.4 mm T5 Torx screw
- One 3.9 mm T5 Wide Head Torx screw
- One 5.0 mm T5 Torx screw

Step 14



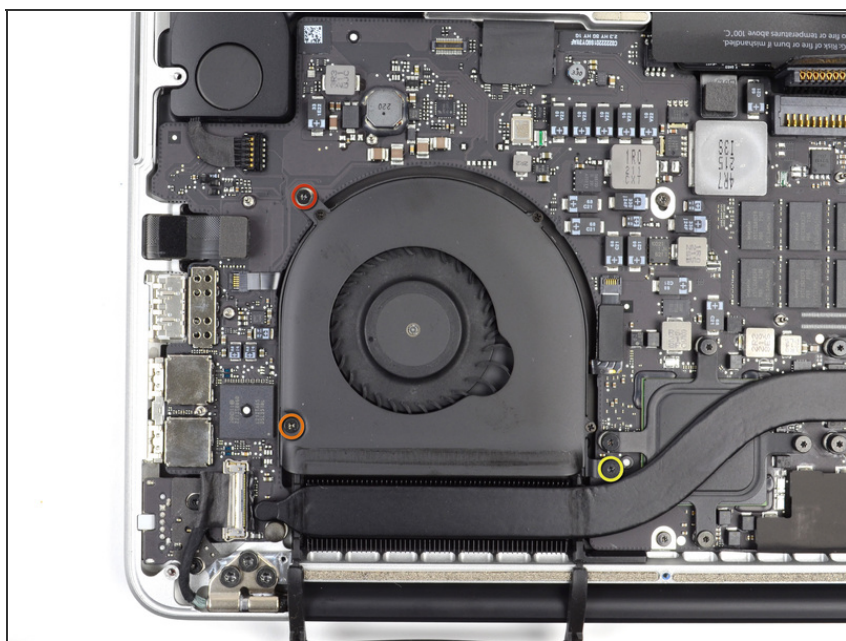
- Lift and remove the right fan out from the MacBook Pro.

Step 15 — Left Fan



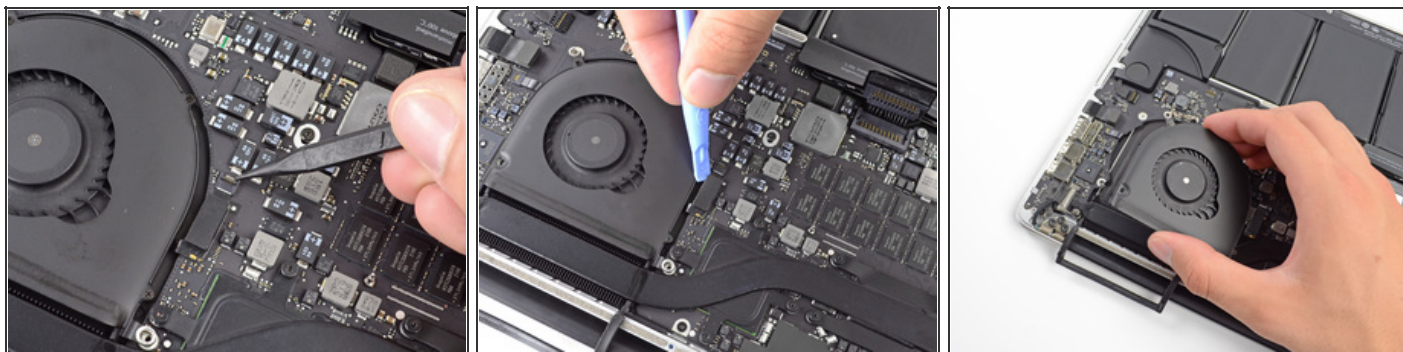
- Use the flat end of a spudger to lift the rubber heat sink cover up off the left fan.



Step 16



- Remove the following three screws securing the left fan to the logic board:
 - One 4.4 mm T5 Torx screw
 - One 5.0 mm T5 Torx screw
 - One 3.9 mm T5 Wide Head Torx screw

Step 17



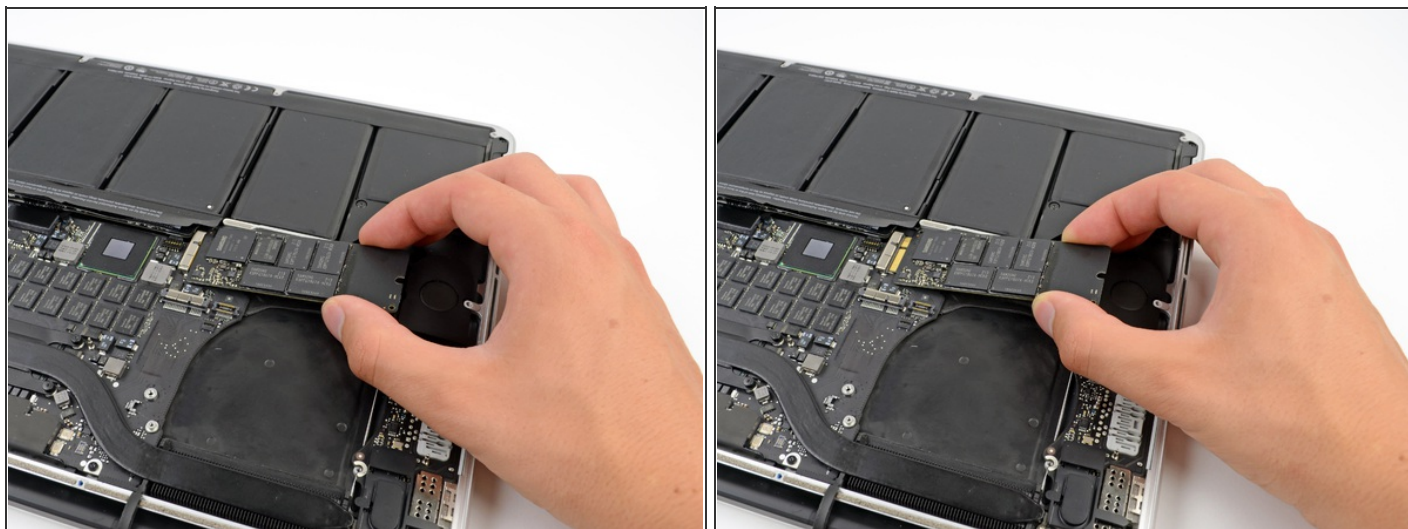
- Use the tip of a spudger to flip up the retaining flap on the left fan ribbon cable ZIF socket.
- Be sure you are prying up on the hinged retaining flap, **not** the socket itself. 
- Starting at the top of the cable, slide a plastic opening tool under the left fan cable to free it from the logic board.
 - Use caution when freeing the cable, as it is strongly adhered to the logic board. 
- Lift the left fan out of the device.

Step 18 — SSD



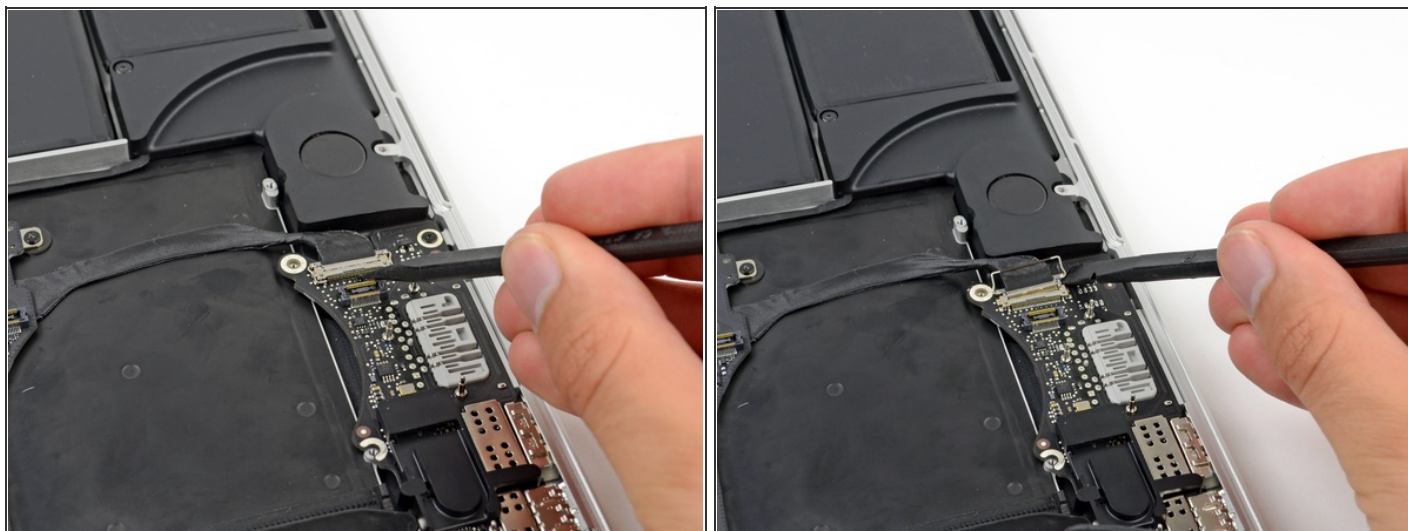
- Remove the single 3.1 mm T5 Torx screw securing the SSD to the logic board.

Step 19



- Slightly lift the rightmost side of the SSD and firmly slide it straight away out of its socket on the logic board.

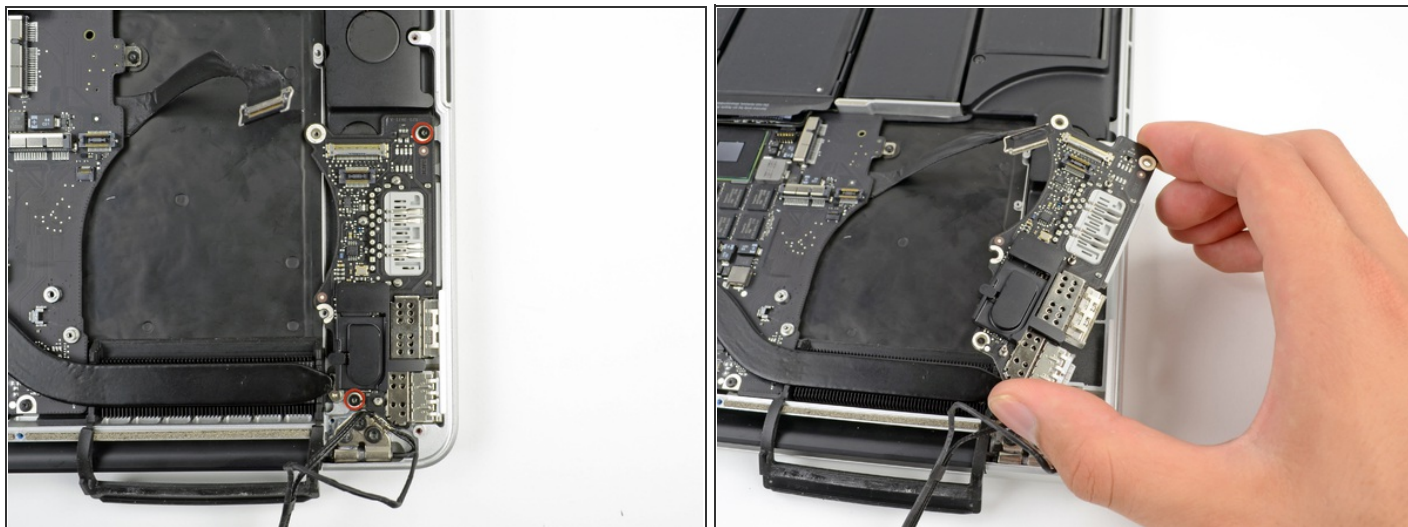
Step 20 — I/O Board



- Use the tip of a spudger to flip up the I/O board data cable lock and rotate it toward the battery side of the computer.
- Use the flat end of a spudger to slide the I/O board data cable straight out of its socket on the logic board.
- Do not lift up on the I/O board data cable, as its socket is very fragile. Pull the cable perpendicular to the face of the logic board.



Step 21



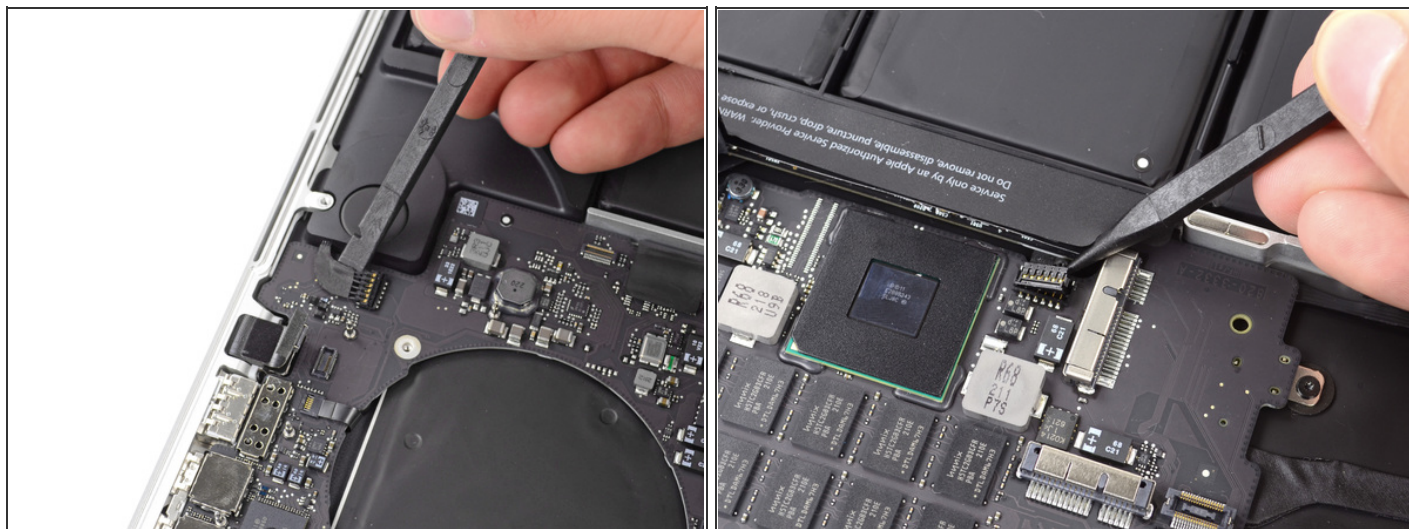
- Remove the two 3.1 mm T5 Torx screws securing the I/O board to the logic board.
- Carefully lift the I/O board and remove it from the lower case.

Step 22 — Logic Board Assembly



- Use the flat end of a spudger to pry the headphone jack connector up from its socket on the logic board.

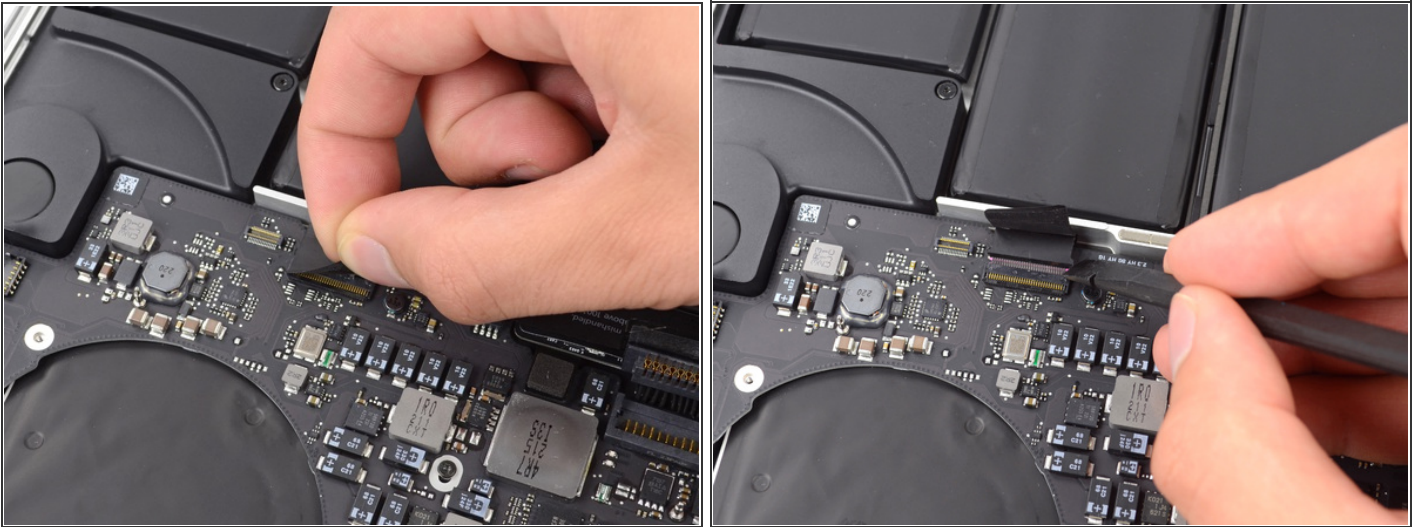
Step 23



- Use the flat end of a spudger to pry the left speaker connector up and out of its socket on the logic board.
- Use the tip of a spudger to pry the right speaker connector up and out of its socket on the logic board
- Be sure to pry on the cable head, and not on the socket itself. Prying on the socket may cause it to separate from the logic board.



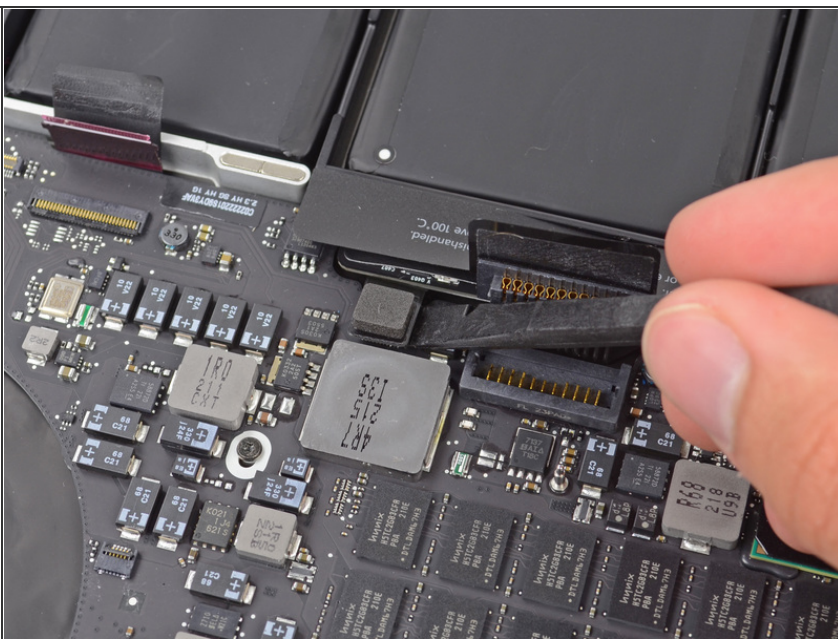
Step 24



- Use the flat end of a spudger to flip up the retaining flap on the keyboard ribbon cable ZIF socket.
- Be sure you are prying up on the hinged retaining flap, **not** the socket itself.
- Use the flat end of a spudger to pull the keyboard ribbon cable out of its socket.

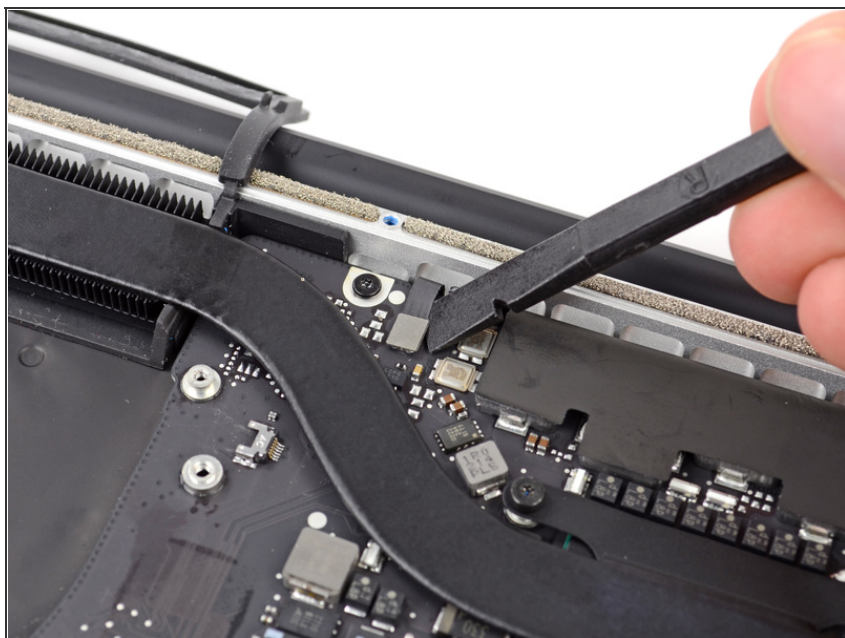


Step 25



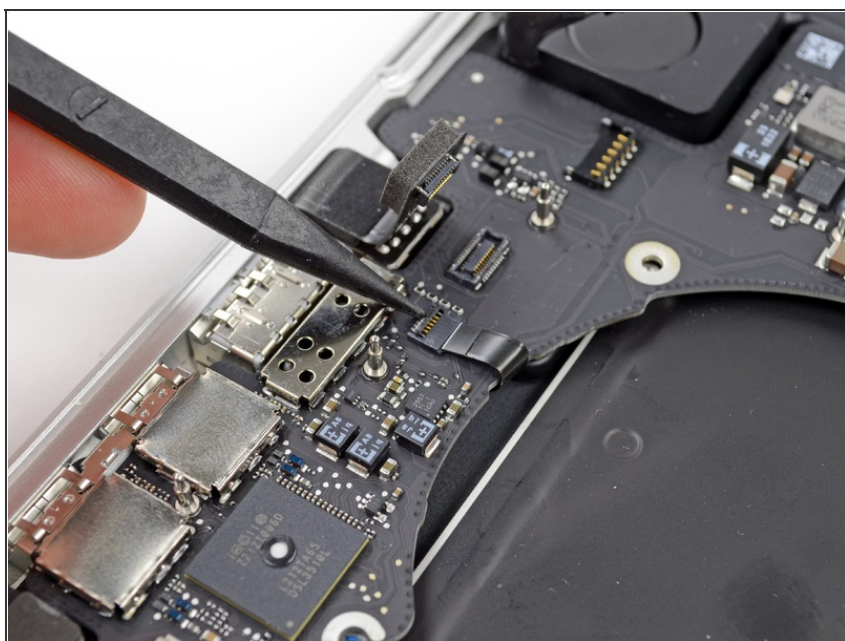
- Use the flat end of a spudger to pry the battery indicator connector up from its socket on the logic board.


Step 26



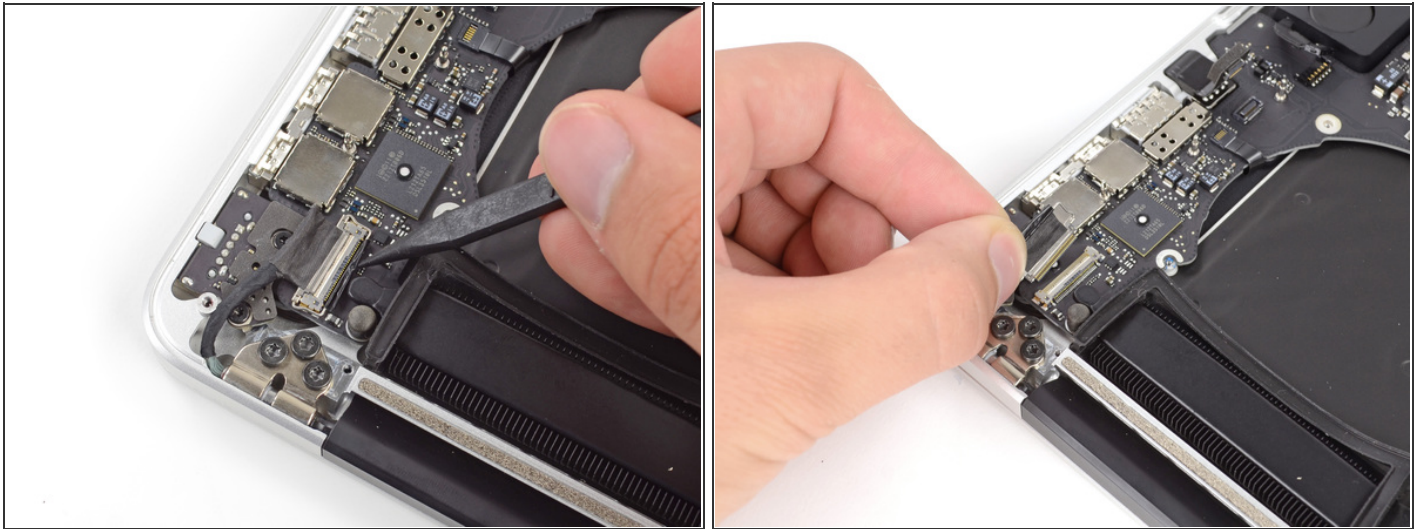
- Use the flat end of a spudger to pry the keyboard backlight connector up from its socket on the logic board.

Step 27



- Use the tip of a spudger or your fingernail to flip up the retaining flap on the microphone ribbon cable ZIF socket.
- Be sure you are prying up on the hinged retaining flap,  **not** the socket itself.
- Pull the microphone ribbon cable out of its socket.

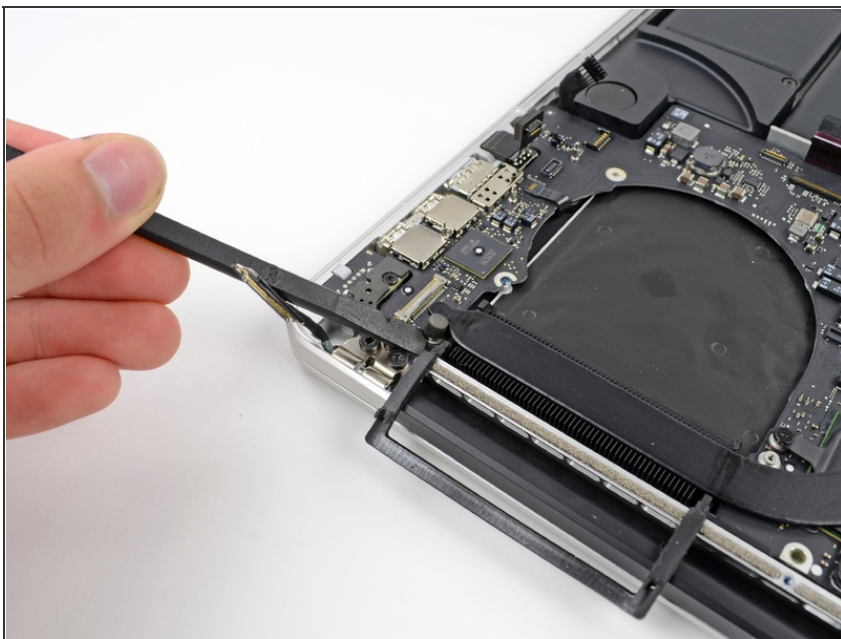
Step 28



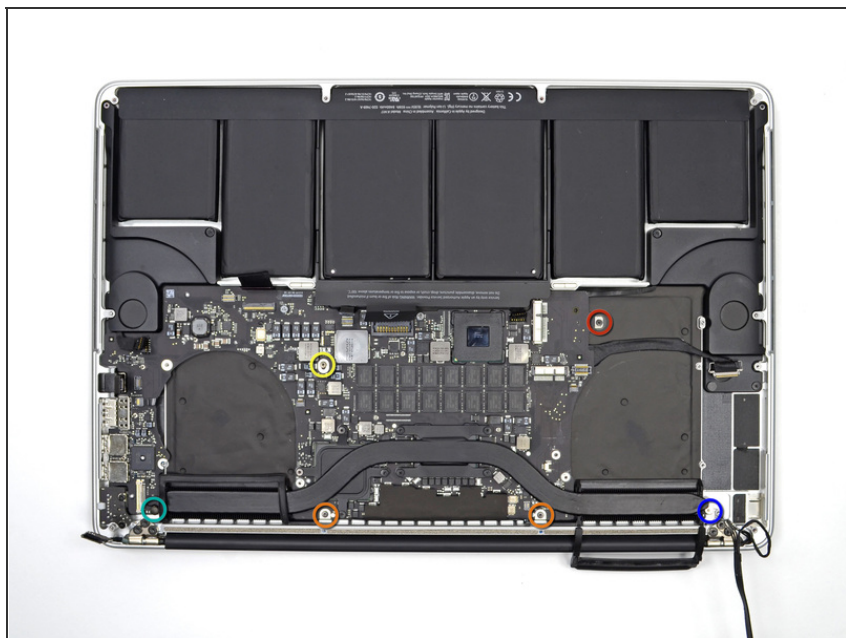
- Use the tip of a spudger to pry the display data cable lock and rotate it toward the DC-In side of the computer.
- Pull the display data cable straight out of its socket on the logic board.
- Do not lift up on the display data cable, as its socket is very fragile. Pull the cable parallel to the face of the logic board.



Step 29

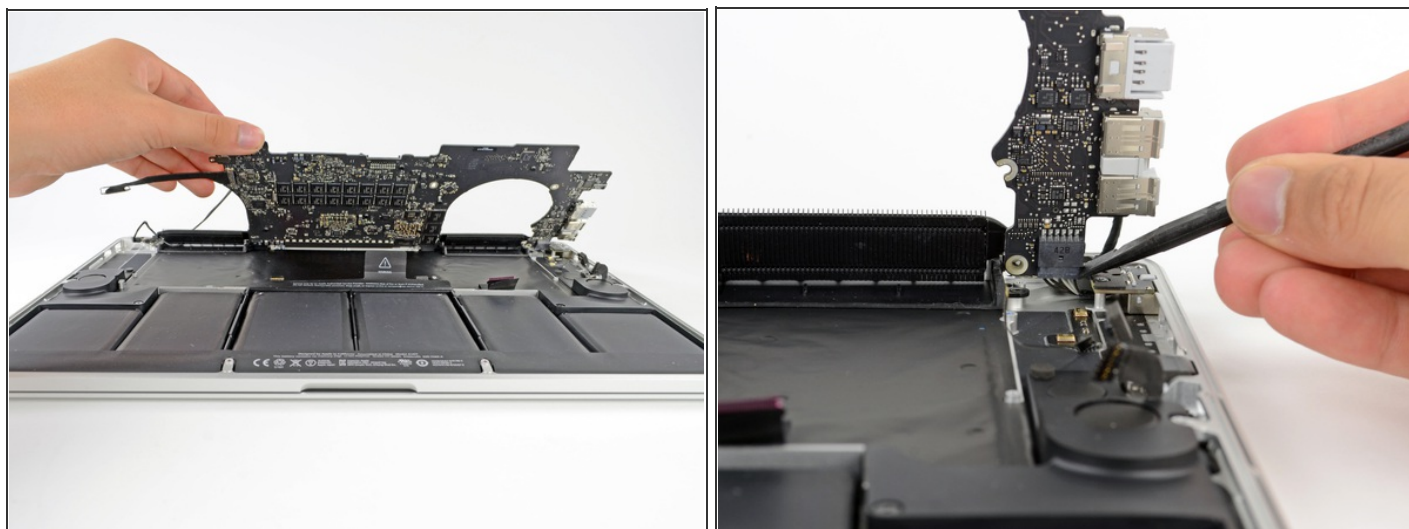


- Use the flat end of a spudger to carefully pry off the rubber screw cap on the raised screw head near to the MagSafe 2 connector.

Step 30

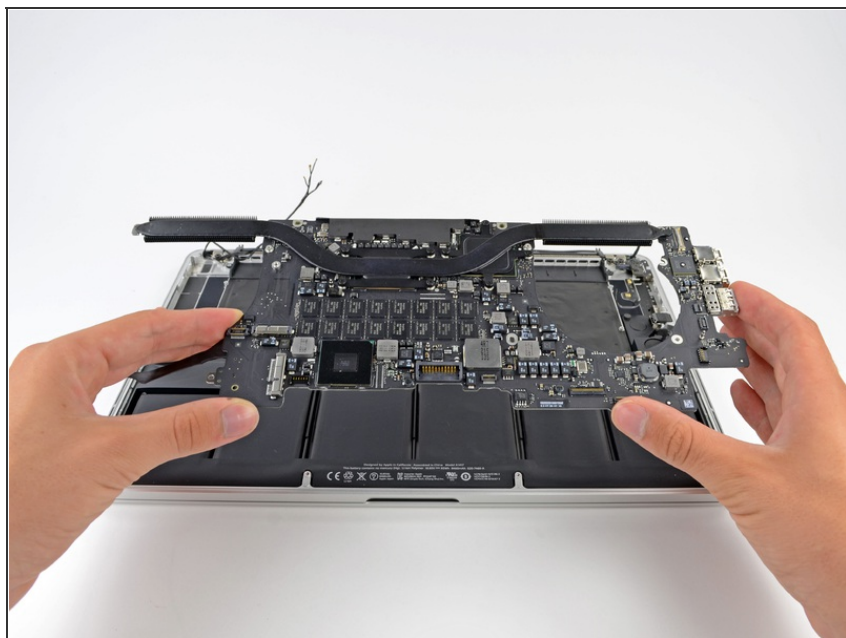
- Remove the following six screws securing the logic board to the upper case:

- One 2.6 mm T5 Torx screw
- Two 5.8 mm T5 Torx screws
- One 3.8 mm T5 Torx screw
- One 5.2 mm Raised Head T5 Torx screw
- One 3.5 mm T5 Torx screw

Step 31

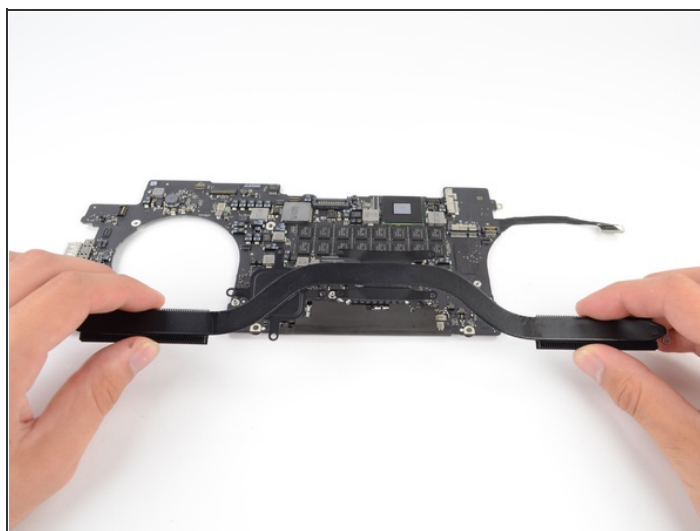
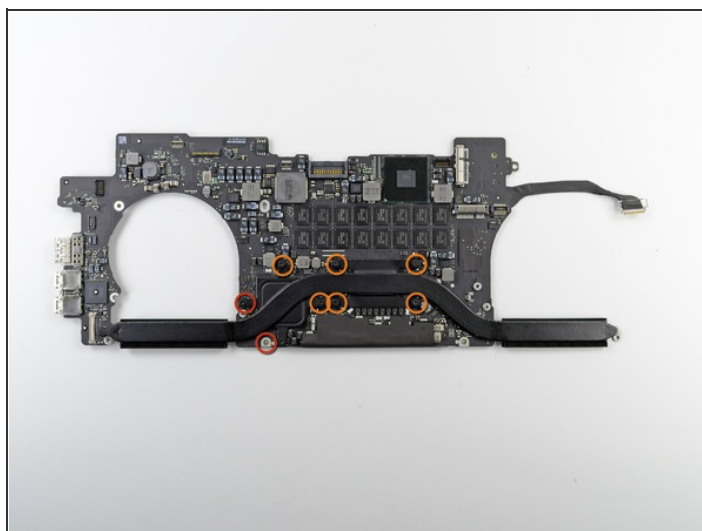
- Lifting from the side nearest the battery, rotate the logic board toward the top of the MacBook Pro.
- Using the flat end of a spudger, carefully push the MagSafe 2 connector out of its socket on the bottom of the logic board.

Step 32



- Remove the logic board assembly from the MacBook Pro.

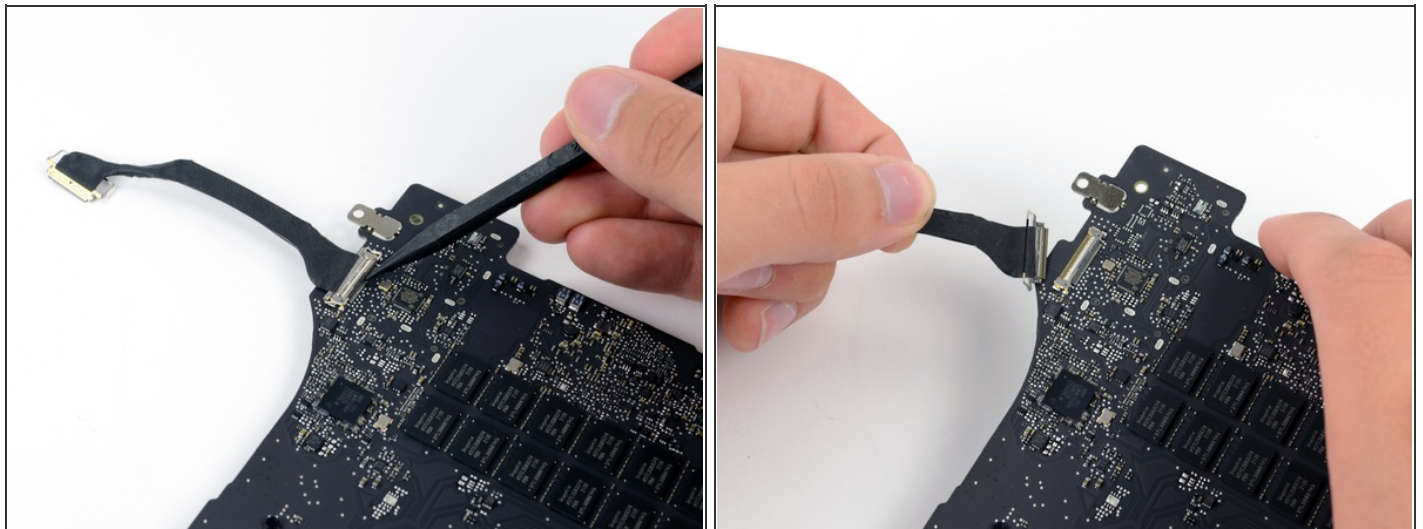
Step 33 — Heat Sink



- Remove the following eight screws securing the heat sink to the logic board:
 - Two 2.4 mm T5 screws
 - Six 3.4 mm T5 screws
- Grip both ends of the heat sink and lift it up from the logic board.
- When installing the new heat sink, do not forget to replace the thermal paste underneath the heat sink.

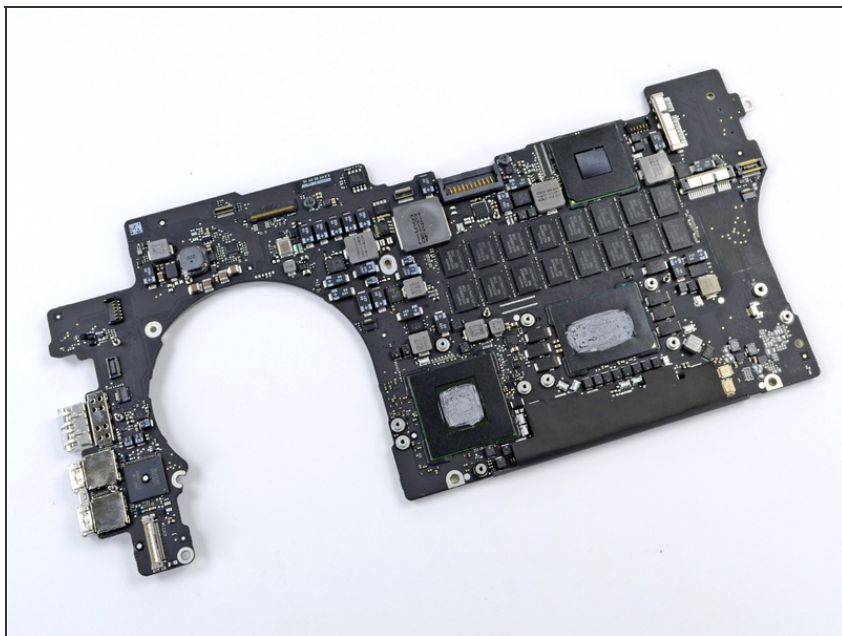


Step 34 — Logic Board



- Use the tip of a spudger to flip up the metal retaining flap on the HDMI data transfer cable.
- Gently pull the HDMI data transfer cable straight out of its socket on the logic board.

Step 35



- Logic board remains.

To reassemble your device, follow these instructions in reverse order.

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